

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP2004/006707

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 B60K7/00 B60G3/06

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B60K B60G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category * | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|------------|---|-----------------------|
| X          | WO 02/083446 A (NAGAYA GO ; BRIDGESTONE CORP (JP)) 24 October 2002 (2002-10-24) figures 50-54   | 1,2,5,6               |
| X          | US 5 848 663 A (KURIKI NOBUHARU) 15 December 1998 (1998-12-15) abstract; figure 1 column 2, lines 54-63 column 3, lines 33-40 column 3, lines 51-54 | 1,2,5,6               |
| X          | GB 156 398 A (PAUL ALPHONSE HUBERT MOSSAY; RANSOMES SIMS & JEFFERIES LTD; MOSSAY & C) 13 January 1921 (1921-01-13) figure 1                         | 1,5,7                 |
|            | -/-   |                       |

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the International search

12 August 2004

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|------------|---|-----------------------|
| X          | DE 37 25 620 A (KLAUE HERMANN)<br>23 February 1989 (1989-02-23)<br>figure 2<br>column 4, lines 27-29<br>-----   | 1,5                   |
| X          | US 5 679 087 A (LUTZ DIETER)<br>21 October 1997 (1997-10-21)<br>figure 2<br>column 9, lines 4-26<br>-----   | 1,5                   |
| A          | PATENT ABSTRACTS OF JAPAN<br>vol. 012, no. 287 (M-678),<br>19 March 1988 (1988-03-19)<br>& JP 62 227813 A (ISUZU MOTORS LTD),<br>6 October 1987 (1987-10-06)<br>abstract<br>----- | 1,5                   |
| A          | EP 0 544 597 A (TOKYO R & D KK)<br>2 June 1993 (1993-06-02)<br>figures<br>-----   | 1,5                   |

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JP2004/006707

| Patent document<br>cited in search report |   | Publication<br>date | Patent family<br>member(s)   | Publication<br>date  |
|---|---|---------------------|--|--|
| WO 02083446                               | A | 24-10-2002          | CN 1460076 T<br>EP 1380459 A1<br>WO 02083446 A1<br>JP 2004115014 A<br>US 2004099455 A1 | 03-12-2003<br>14-01-2004<br>24-10-2002<br>15-04-2004<br>27-05-2004 |
| US 5848663                                | A | 15-12-1998          | JP 3525954 B2<br>JP 8175193 A<br>DE 19547314 A1  | 10-05-2004<br>09-07-1996<br>11-07-1996                             |
| GB 156398                                 | A | 13-01-1921          | NONE   |  |
| DE 3725620                                | A | 23-02-1989          | DE 3725620 A1  | 23-02-1989   |
| US 5679087                                | A | 21-10-1997          | DE 4421427 C1<br>FR 2721453 A1   | 18-01-1996<br>22-12-1995   |
| JP 62227813                               | A | 06-10-1987          | NONE   |  |
| EP 0544597                                | A | 02-06-1993          | JP 3196121 B2<br>JP 5147445 A<br>EP 0544597 A1   | 06-08-2001<br>15-06-1993<br>02-06-1993                             |